Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 80%. We keep your highest score.

Next item →

1 / 1 point

Notation

$$a_j^{[l]} = g(\vec{w}_j^{[l]} \cdot \vec{a}^{[l-1]} + b_j^{[l]})$$
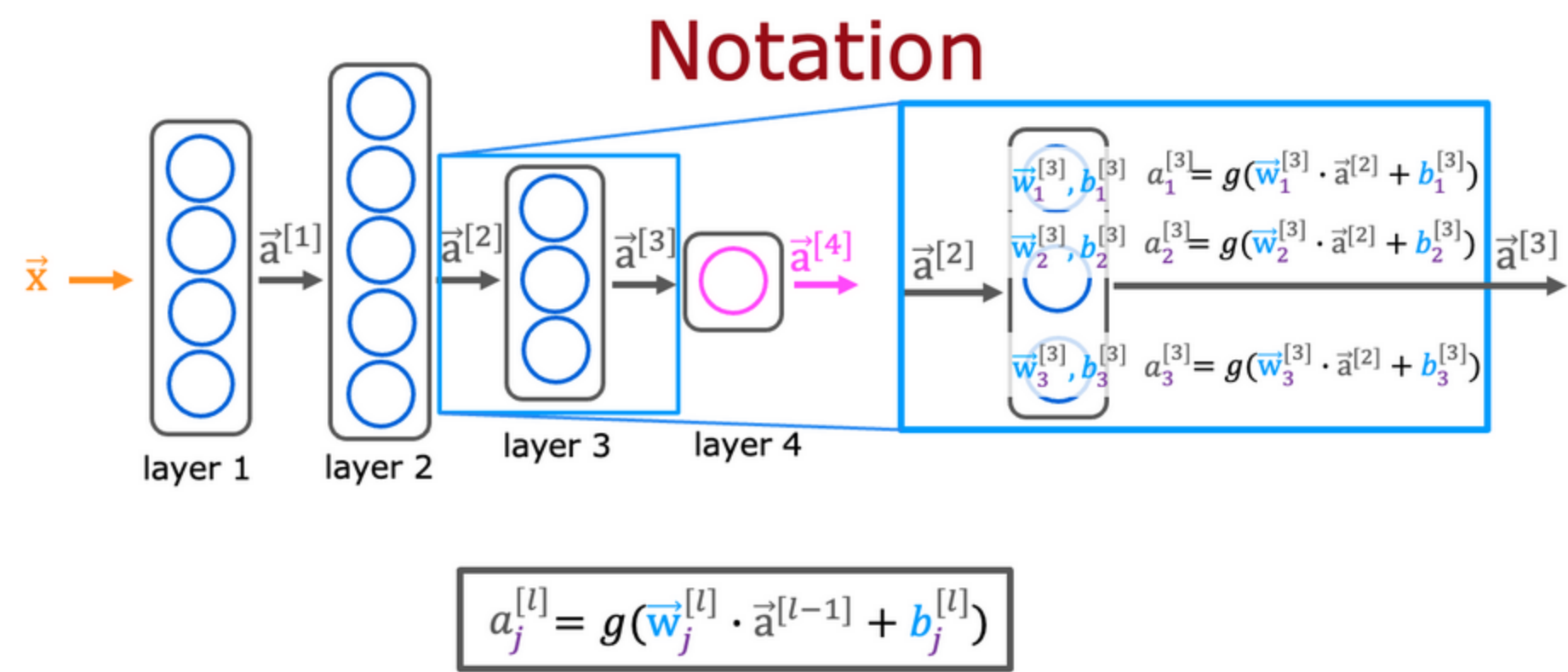
1. For a neural network, what is the expression for calculating the activation of the third neuron in layer 2? Note, this is different from the question that you saw in the lecture video.

   ⦿ $a_3^{[2]} = g(\vec{w}_3^{[2]} \cdot \vec{a}^{[1]} + b_3^{[2]})$

   ◯ $a_3^{[2]} = g(\vec{w}_2^{[3]} \cdot \vec{a}^{[1]} + b_2^{[3]})$

   ◯ $a_3^{[2]} = g(\vec{w}_2^{[3]} \cdot \vec{a}^{[2]} + b_2^{[3]})$

   ◯ $a_3^{[2]} = g(\vec{w}_3^{[2]} \cdot \vec{a}^{[2]} + b_3^{[2]})$

   ✓ **Correct**
   Yes! The superscript [2] refers to layer 2. The subscript 3 refers to the neuron in that layer. The input to layer 2 is the activation vector from layer 1.

Handwritten digit recognition

1 / 1 point
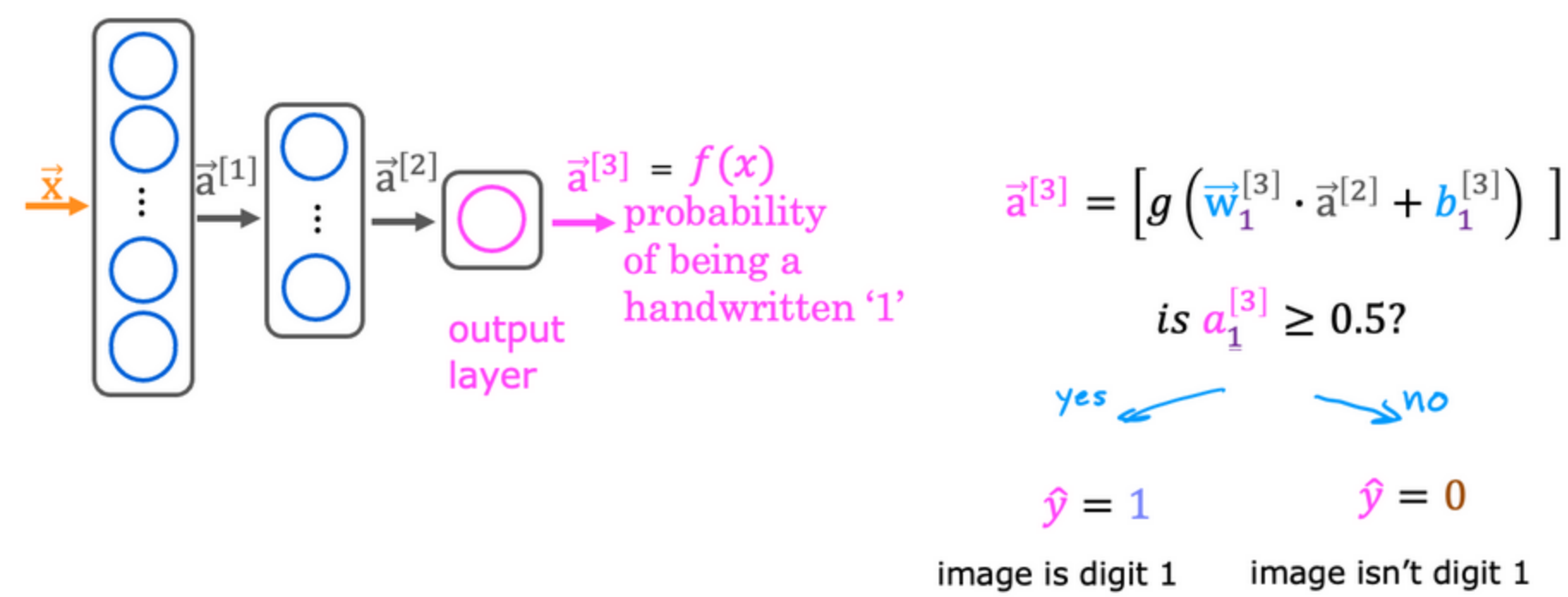
2. For the handwriting recognition task discussed in lecture, what is the output $a_1^{[3]}$?

   ◯ A vector of several numbers, each of which is either exactly 0 or 1

   ◯ A vector of several numbers that take values between 0 and 1

   ◯ A number that is either exactly 0 or 1, comprising the network's prediction

   ⦿ The estimated probability that the input image is of a number 1, a number that ranges from 0 to 1.

   ✓ **Correct**
   Yes! The neural network outputs a single number between 0 and 1.